

Appl. No. 10/033,346
Amdt. Date Aug. , 2003
Reply to Office Action of May 6, 2003

REMARKS

Priority

In response to "priority" of the Office Action, Applicants have attached a certified copy of the TW-090220620 application as required by 35 U.S.C. 119(b).

Claim Rejections-35 U.S.C. §102

Claims 1, 2, 4, 5, 7-10, 13, and 19 are rejected under 35 U.S.C. §102 (b) as being anticipated by United States Patent Number 6,327,405 to Leyva et al.

In response to the above-mentioned rejections, Applicants have amended the claims, and believe the current claims allowable.

Referring to the current claim 1, Leyva fails to disclose a plurality of heat shrinkage pipes and a plurality of holders, wherein each of the heat shrinkage pipes retains optical fibers therein, and each of the holders holds at least one heat shrinkage pipe therein. Thus, claim 1 is novel, and claim 2, which directly depends from claim 1, is novel.

As to claim 4, Applicants request that the examiner note that only a pair of ribs (small upstanding panels) 35 of Leyva is formed on the compensating elements 33, 34 which are welded to the outer ends of the base 36. However, an array of ribs of the instant invention, comprising pairs of ribs, is upwardly and integrally formed from a

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bottom of the motherboard. The DWDM (Dense Wavelength Division Multiplexer) of the instant invention does not have compensating elements. Applicants also request the examiner note that the fiber ends of the coupler are epoxied in each ferrule 30, 31 of Leyva, and the filter elements 50 are placed in grooves attached with RTV or similar adhesive. **However, each of the retainers of the instant invention, which is secured in a corresponding channel between two corresponding pairs of the ribs, is free of epoxy.** For these reasons, Applicants believe claim 4 novel. Thus, claims 5, 7-10, 13, and 19, which directly or indirectly depend from claim 4, are novel.

Claim Rejections under 35 U.S.C. 103(a)

Applicants have amended the claims, and believe the current claims unobvious.

The examiner indicated that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Leyva to include heat shrinkage tubing to provide greater rigidity at the splice point. Applicants want to traverse the argument. **Heat shrinkage tubing is usually used as package material, not for sealing the splices of fibers. In fact, epoxy is often used for sealing optical fiber in a ferrule. As described in the reference, the paired fiber ends of the coupler of Leyva are epoxied in longitudinal slots in each ferrule 30, 31 and the epoxy is in contact with bare glass on the inside end of the ferrule 30, 31. As a result, the splices of Leyva are sealed in the ferrule by means of epoxy. Obviously, one skilled in the art is not**

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motivated to using heat shrinkage tubing in place of epoxy.

Therefore, claim 1 is patentable. Claims 2-3, which directly or indirectly depend from claim 1, are patentable.

As to claim 4, Applicants request that the examiner note that the DWDM module of Leyva, wherein each unit comprises temperature compensating elements, a pair of ferrules holding a fiber, a pair of upstanding panels providing attachment for the ferrules, and the Bragg grating, and the entire unit being typically mounted within the housing, is very different from the structure of the instant invention. Furthermore, Leyva does not teach or suggest that the temperature compensating elements and the Bragg grating can be eliminated or displaced by other elements. Without the temperature compensating elements and the Bragg grating, the DWDM module of Leyva cannot work. **However, the DWDM module of the instant invention does not include any temperature compensating elements nor a Bragg grating. The foregoing entire unit of Leyva is typically mounted within the housing. However, an array of ribs is upwardly and integrally formed from a bottom of the housing.** Additionally, the DWDM module of Leyva uses epoxy to secure DWDMs therein, which is unduly time-consuming and adversely affects the optical characteristics of the module. It is an objection of the instant invention to solve this problem of using epoxies, and the DWDMs are secured in the module of the instant invention without using epoxy. For these reasons, the prima facie case of obviousness of claim 4 cannot be established.

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Furthermore, the optical fiber organizer of Milanowski comprises a support, a plurality of stacked cassettes, an arcuate fan-out assembly, and an arcuate cover. The structure is very different from both Leyva and the instant invention. Furthermore, the optical fiber organizer of Milanowski cannot be sealed since the cassettes must have an open and a closed position. Therefore, the combination of Leyva and Milanowski is not suggested. Even if the devices of Leyva and Milanowski are combined, the combination, which would comprise a rotatable cassette having an open and a closed position, and each DWDM unit of which must include temperature compensating elements and the Bragg grating, obviously cannot achieve the result achieved by the DWDM module of the instant invention.

In view of the foregoing, claim 4 is patentable. Claims 5-20, which directly or indirectly depend from claim 4, are also patentable.

Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyva as applied to claims 1 and 4 above.

Since claim 4 is patentable based on the foregoing reasons, claims 14-17, which directly or indirectly depend from claim 4, are also patentable. However, Applicants additionally request that the examiner note that the DWDM module of Leyva uses epoxy to secure DWDMs therein, that Leyva does not suggest any other securing method, and epoxy, as a conventional method well known in the art, cannot be displaced without unduly experiences by the ordinary person skilled in the art using a loop in the manner as the examiner suggested.

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Claims 6, 11, 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyva as applied to claims 1 and 4 above.

Claims 3, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyva as applied to claims 1 and 4 above and in view of United States Patent Number 6,282,360 to Milanowski et al.

For these rejections, Applicants believe that the current claims 3, 6, 11, 12, 18, 20, and 21 are patentable based on the reasons stated above as applied to claims 1 and 4. Additionally, the examiner indicated that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the module of Leyva to include the arcuate portions of the fiber holder of Milanowski to prevent optical losses due to microbending. Applicants want to traverse this argument. Since each unit of the DWDM module of Leyva comprises temperature compensating elements, a pair of ferrules holding a fiber, a pair of upstanding panels providing convenient attachment for the ferrules, and the Bragg grating, even if a person having ordinary skill in the art could modify the module of Leyva to include the arcuate portions of the fiber holder of Milanowski, the formed structure still would not meet the instant invention. What is more, there is no suggestion to make the two references combination given above.

On the other hand, claim 21 defines a plurality of retainers holding the sleeves of DWDMs in position in the interior area of the module, and a plurality of holders retaining a plurality of shrinkage pipes in a periphery of the module. Differently, in Leyva et al. the Examiner does

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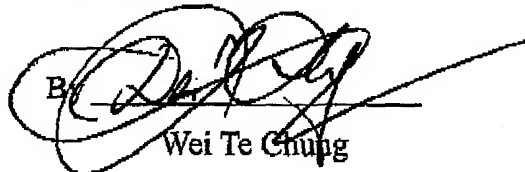
not clearly indicate which elements are a) the retainers, b) the DWDMs, c) the holders and d) the shrinkage pipes, and needless to say where such alleged elements are located, i.e., the interior area or the periphery area. Accordingly, applicant asserts that the combination of the cited references can NOT render obvious the above claimed limitations defined in claim 21.

Similarly, the new claims 22-23 are patentable since they depend from claim 21.

In view of the foregoing, the subject application as claimed in the pending claims is in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,

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